

## Apnea Knowledge Test

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**Purpose** A multiple-choice questionnaire designed to assess the respondent's knowledge of obstructive sleep apnea and Continuous Positive Airway Pressure (CPAP). Developed by Smith and colleagues [1], the questionnaire was initially intended to be administered before and after patient education programs. A significant difference between the knowledge scores achieved pre- and post-program would indicate an effective intervention. Though findings thus far have been inconclusive, the questionnaire's developers suggest that CPAP compliance may be related to patient knowledge and beliefs – a standardized tool for measuring education level will allow future studies to investigate this claim. For a similar tool, see the Apnea Beliefs Scale (Chap. 3).

**Population for Testing** No age range was specified by developers, but their study investigating the tool's psychometric properties used a sample of predominantly middle-aged (mean age,  $52.6 \pm 12.6$  SD) obstructive sleep apnea patients. The test was found to be comprehensible at about a fourth grade reading level.

**Administration** Self-report, pencil-and-paper test. Requires 5–10 min for testing.

**Reliability and Validity** In an initial study evaluating the tool's psychometric properties, Smith

et al. [1] found a low-to-modest internal consistency (Cronbach's  $\alpha = .60$ ).

**Obtaining a Copy** A published copy can be found in the original study conducted by Smith and colleagues [1].

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**Scoring** Correct responses on multiple-choice questions are given one point. For the two open-ended questions at the close of the test, respondents are awarded one point per correct element, allowing for a maximum of four points for question 16 and three points for question 17. Higher scores indicate a greater knowledge of obstructive sleep apnea and CPAP titration, while lower scores may suggest the need for educational intervention, particularly if later findings indicate a relationship between apnea-related knowledge and treatment outcomes. Until conclusive evidence has been found linking CPAP compliance to patient education, this tool is better suited to research purposes rather than clinical use.

**Apnea Knowledge Test**

1. The type of sleep apnea that causes a patient to forget to breathe is:

① central sleep apnea                    ② obstructive sleep apnea  
③ mixed sleep apnea                    ④ none of the above

2. CPAP stands for:

① continues to push air past your nose            ② closed passages and pressures  
③ continuous positive airway pressure            ④ central pauses and pressures

3. To diagnose sleep apnea, lab testing is usually held:

① in the morning                    ② at night  
③ in the afternoon                    ④ none of the above

4. Air leakages can occur:

① from the mouth area                    ② into the eyes  
③ from the nostril region                    ④ all of the above

5. The type of sleep apnea that is caused when air passages in or near the throat become blocked, is called:

① central sleep apnea                    ② obstructive sleep apnea  
③ mixed sleep apnea                    ④ none of the above

6. CPAP works by:

① keeping your airways open                    ② administering medication to help you sleep  
③ encouraging sleep at a subconscious level            ④ none of the above

7. During the CPAP trial in hospital

① you will have to get up every hour to adjust the CPAP system                    ② you will be allowed to sleep as if at home, unattached to machines/computers  
③ you will be asked to wear a CPAP mask                    ④ none of the above

8. What is (are) the general rule(s) sleep apnea patients should remember?

① reduce weight                    ② reduce alcohol intake  
③ exercise more                    ④ all of the above

9. Possible problems with using the CPAP system include:

① blocked nose                    ② pressure sores  
③ dry mouth                    ④ all of the above

10. CPAP equipment should be washed using

① bleach                    ② antiseptic solution  
③ dishwashing detergent                    ④ all of the above

11. The mask and frame should be washed

① every morning                          ② every month  
③ every week                              ④ when necessary

12. CPAP works best when used

① whenever you sleep                    ② every second night  
③ every night                             ④ weekdays only

13. CPAP should NOT be used

① in winter                                ② when you have a head cold  
③ in summer                                ④ none of the above

16. What is sleep apnea? \_\_\_\_\_

17. Name three symptoms of sleep apnea? \_\_\_\_\_

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## Reference

1. Smith, S. S., Lang, C. P., Sullivan, K. A., & Warren, J. (2004). Two new tools for assessing obstructive sleep apnea and continuous positive airway pressure therapy. *Sleep Medicine*, 5, 359–367.

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## Representative Studies Using Scale

Smith, S. S., Lang, C. P., Sullivan, K. A., & Warren, J. (2004). A preliminary investigation of the effectiveness of a sleep apnea education program. *Journal of Psychosomatic Research*, 56(2), 245–249.

Note: There are no items ‘14’ and ‘15’ in the original publication.